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## Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, OC-E

SPM 60-0857

DATE:

FROM : Chief, Special Programs Staff, OC

30 MAR 1960

*Bid solicited  
verbally by JMB  
13 April 1960*

SUBJECT: "All - Frequency Position" Antenna

1. With the apparent success of the 30 to 1000 mcs antenna development, the ELINT Activities Branch can now plan on the continuation of the "All - Frequency Position" antennas. The earlier proposals for the one to ten kilomegacycle antenna coverage were found prohibitive due to high costs. It would, therefore, be more realistic to consider at this time an antenna with less gain but designed for mounting as a feed to a parabolic reflector at a later date when absolute gain figures are known.

2. It is requested that action be taken to locate a contractor for constructing the following antenna:

- |                            |   |
|----------------------------|---|
| A. Frequency coverage      | 1 to 10 Kmc   |
| B. Impedance               | 50 ohms unbalanced  |
| C. V.S.W.R.                | Less than 3:1   |
| D. Gain                    | 6 db over dipole  |
| E. Beamwidth               | Symmetrical in azimuth and vertical plane for future mounting in circular parabolic reflectors. |
| F. Polarization            | Linear with provisions for manually rotating from horizontal to vertical.                       |
| G. Loading considerations  | Seventy mile per hour winds with one fourth inch radial ice.                                    |
| H. Mounting considerations | To mount on a mast with a three inch outside diameter.  |
| I. Quantity                | 5 ea.   |

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~~SECRET~~

SPM 60-0857

Page Two

3. The requirement for this antenna is based on the need for an "All - Frequency Position" with a fundamental concern for integration into existing base stations. It is proposed that this 1 - 10 Kmc antenna be mounted on the supporting mast of the 30 - 1000 mcs antenna. In this arrangement, only one tower will be required for installation close to the building housing the receivers.

4. Recent discussions with [redacted] OC-E/R&D/EP, revealed 25X1  
that a Signal Corps contract is in existence with [redacted] for 25X1  
the development of antenna systems using feeds similar to this  
requirement. Our request is unique in the mounting bracket design because  
the antenna must be capable of future use as a feed to a parabola,  
without modification, but immediately used as an antenna mounted only  
on a three inch mast.

25X1

Distribution:

Orig &amp; 1 - Addressee

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